
Proposal for



SIOUXLAND, NE

**PROPOSAL #1616.REV5
AUGUST 14, 2015**

Information provided herein is confidential and shall not be forwarded to any third parties without the express written approval of Clean Water Technology, Inc.

PROPOSAL #1616.REV5
GEM SYSTEM PROPOSAL

August 14, 2015

Mr. Chad Olsen
Anthony Kappell
McMahon Group
1445 McMahon Drive
Neenah, WI 54956

Clean Water Technology, Inc. ("CWT") is pleased to offer this proposal for purchase and installation of the **Gas Energy Mixing ("GEM") System 1050/2100XL** solid/liquid separation at the **Big Ox** facility in **Siouxland, NE**.

CWT's GEM System is designed to be the **most PROACTIVE, sustainable, effective and efficient** wastewater treatment technology available. Our Clients save money and resources through the GEM System's better results, more efficient chemical usage, small footprint, less and drier sludge production and low energy and operational costs than conventional DAF technologies.

Since inception in 2004, CWT has installed over 400 wastewater systems and has grown exponentially with offices in the US, Mexico, Colombia, Peru, Ecuador, China, Australia, South Africa, Europe, India and Dubai and installations globally. Our Client list includes Cargill Biodiesel (x2) American Foods Group, JBS Pork, Butterball, OSI Group (x2), Monogram Meats, Dakota Provisions, West Liberty Foods (x3), MBA Smart Chicken/Tecumseh Poultry, General Mills (x2), Emmi Roth Kase (x2), Dean Foods, Nestle USA, BASF, Darling International (x4) and more.

CWT is an innovator in the field of wastewater technology and relies on its internal team of scientists and engineers. With over 12 patents, CWT is changing the industry with its Gas Energy Mixing ("GEM") System, a unique and innovative method for the removal of TOTAL SUSPENDED SOLIDS (TSS), CHEMICAL OXYGEN DEMAND/BIOLOGICAL OXYGEN DEMAND (COD/BOD), and FATS, OIL, and GREASE (FOG). CWT's GEM System is fundamentally better than traditional flotation technologies in three ways:

1. The Liquid Solid Gas Mixing ("LSGM") Heads provide homogeneous mixing of liquid contaminants and chemistry resulting in reduced consumption and more efficient use of chemicals.
2. The LSGM's offer the flexibility to change the mixing energy to the specific wastewater characteristics and changing wastewater conditions.
3. The GEM System saturates 100% of the wastewater stream with dissolved air and has the ability to control when the dissolved air is released from the water. This results in more enhanced and more efficient flotation of the contaminants.

APPLICATION

Install a GEM System 1050/2100XL at the **processing** facility in **Siouxland, NE**. The GEM System will be calibrated at 2100 gallons per minute (gpm) or flow as discussed between CWT and Client.

Stream Characteristics: High Strength Food Waste and Anaerobic Filtrate from Screw Presses.

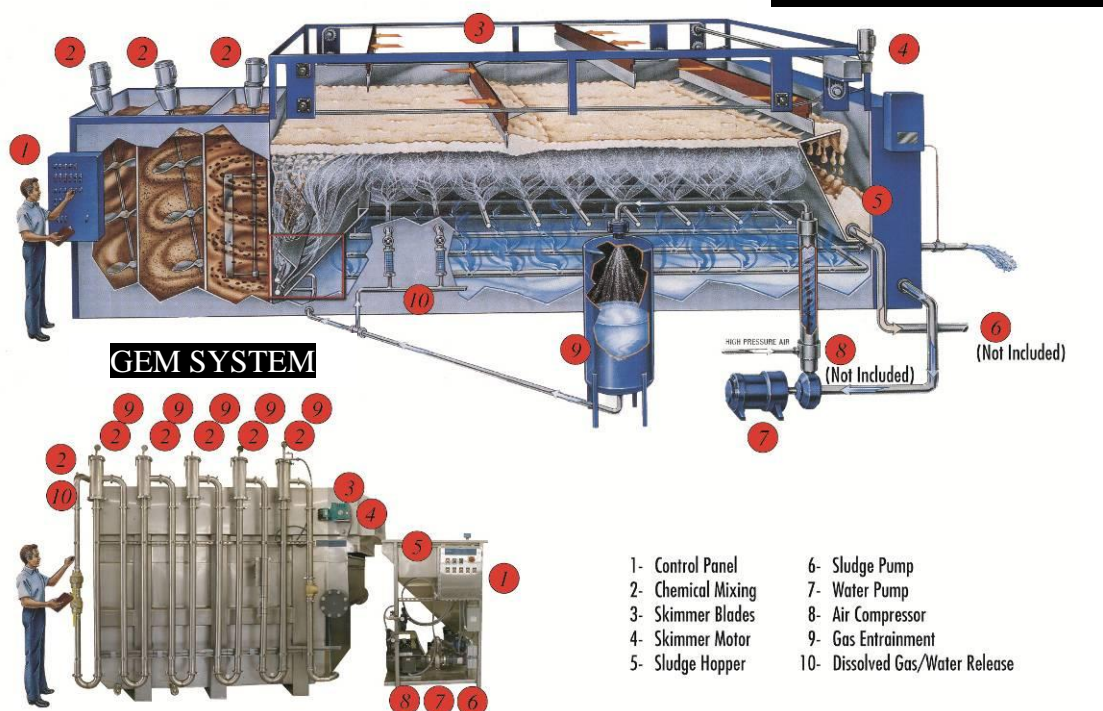


Current GEM Installation



GEM System Results

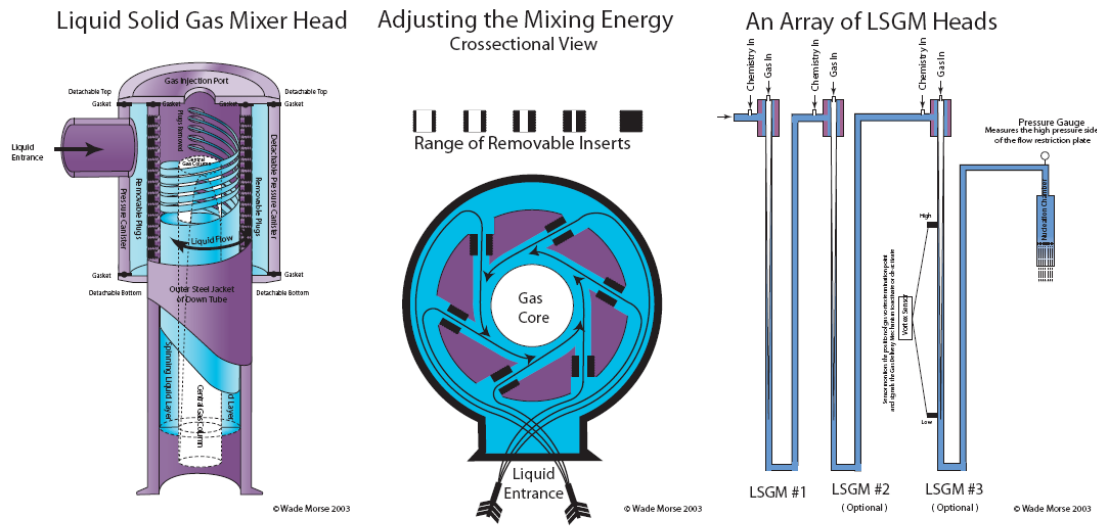
HOW THE GEM SYSTEM IS DIFFERENT THAN A DAF



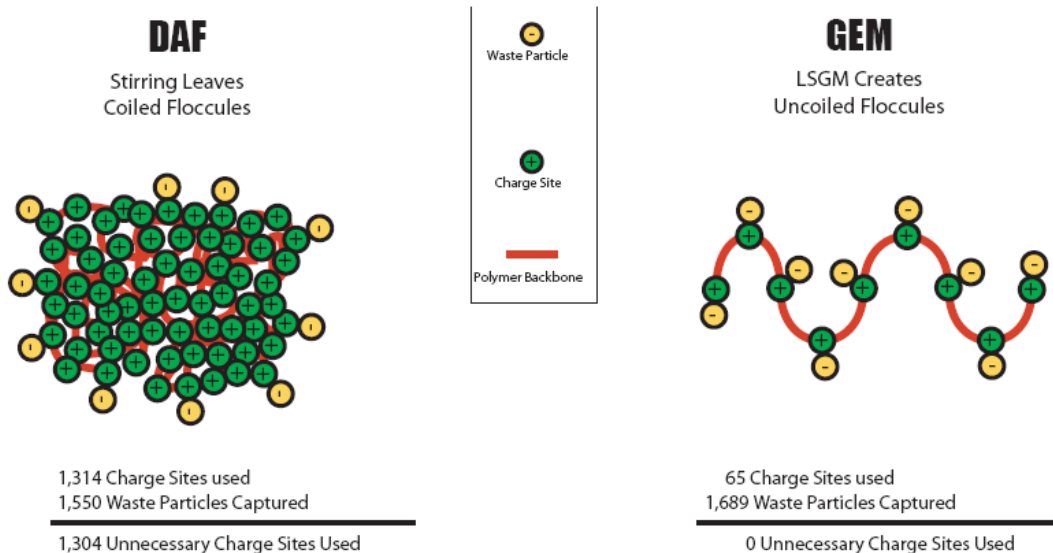
Chemical Efficiency and Chemical Mixing: (Patent #: 6797181)

A traditional DAF unit uses a non-intrusive method of mixing chemicals, such as flocculation tubes or mixing propellers, which are traditional forms of mixing. Both methods attempt to uncoil the polymers into the waste stream. Both forms are not efficient because they cannot uncoil the monomer backbone of the polymers to their full extent.

In the GEM System, the chemicals are mixed in the Liquid Gas Solid Mixing (LSGM) Heads as seen in the picture below:



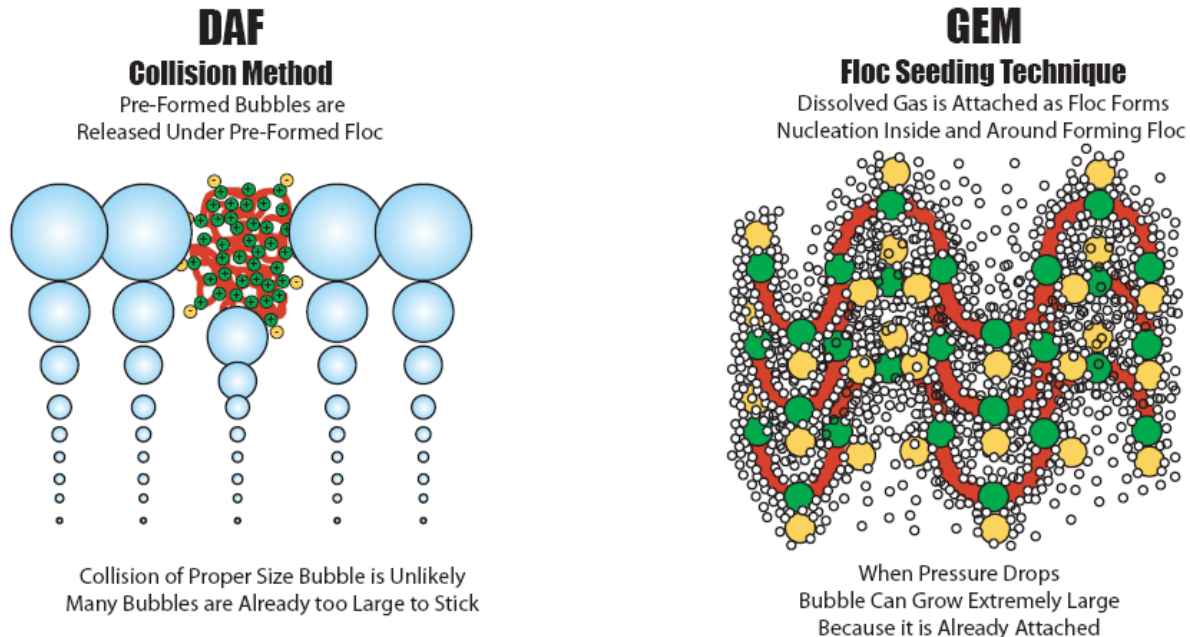
The GEM System uses centrifugal forces to pull apart polymers without shearing them, and has a series of six heads which can vary in mixing energies. Each head can be adjusted to allow a specific mixing energy in which the waste stream, application and physical chemical requirements can be met.



The result is greater chemical efficiency, and more concentrated sludge. In addition, if parameters/loadings in the waste stream ever change in the future, and the need for change in chemicals used arises, the ratio of energy (open to closed holes) in each of the LSGM heads can be easily adapted in order to accommodate these changes.

Difference in Aeration (Patent #: 7347939)

The GEM System injects air into 100% of the waste stream, and dissolves air into the waste stream before the floc forming process begins. Since the GEM System forms the floc with air already trapped inside, it produces flocs which are very buoyant, and much drier than competing products, which reduces sludge hauling costs.



This system eliminates RECIRCULATION LOOPS and AIR GRIDS in the tank which can get plugged and require maintenance.

Due to the fact that the flocs float by themselves and no air is introduced into the tank, a smaller floatation cell is required, reducing overall footprint. This also eliminates carry-over of non-floating flocs and less FOG/TSS/BOD/COD transferred to discharge.

With more effective aeration and greater chemical efficiency, the GEM System is able to consistently remove suspended solids down to 10-25 ppm if needed.

Air is Dissolved into 100% of the Waste Stream (Patent #: 6964740)

Unlike most traditional DAF technologies, the GEM System aerates and treats 100% of the waste stream under pressure. This fundamental approach of the GEM System technology grants the ability to rapidly dissolve air into the waste stream before treatment chemicals are added, which in turn allows the entrainment of air inside the floc structure.

In addition, several maintenance issues such as plugging, which exist in a typical recirculation loop on a DAF floatation cell, are eliminated.

The amount of air entrained makes the system better than other technologies due to the fact that the flocs have a high amount of entrained air, and as soon as flocs enter the flotation cell under atmospheric pressure, the entrained air expands inside the floc, which pushes out all the excess water, allowing for much drier sludge. In addition, the clean water discharged from the GEM System has a high DO level (From 0.9 ppm to 2.0 ppm), which is beneficial for an application where the GEM System effluent continues to a biological treatment system such as an MBR, anaerobic digester, etc.

Adjustable Flow Rates and Contaminant Loadings

Since chemical addition, mixing and solids / liquid separation occurs in the LSGM Heads, the flow and contaminant loading of the GEM System is not constrained by the size of the tank or an aeration grid, but by the size of the LSGM heads. These LSGM heads can allow more water or less water as needed. Therefore, the GEM System is the only system in the market that will let the client exponentially increase or decrease its flows.

In addition, as Clients implement water conservation efforts in the plant, the GEM System is equipped to handle higher contaminant loadings with no increase in tank size or capital. The contaminant loadings can increase substantially (an order of magnitude) and the GEM System will continue to efficiently work and clean the stream to meet the effluent parameters. This is of primary importance with the conservation efforts being made by companies and demanded by customers. With the GEM System you will be able to clean any level of contaminants without increases in tank size of capital.

This is extremely important in installations where the characteristics of the stream change continuously due to processing of different products that create more or less FOG or TSS in the stream. With a slight adjustment by wastewater staff, the GEM System can adapt to higher flows and heavier contaminant loading while Client would normally need a larger or additional DAF to accommodate fluctuations.

For this project, CWT has been asked to size the unit for 2100 gpm. As such, this unit is expanded to its maximum flow. In most situations, holes in the LSGM heads can be closed off and later opened to increase flow. Should client wish to set the GEM System to a lower flow, this can easily be accommodated prior to shipment or once the unit is onsite. Client will be trained to make these quick adjustments.

Hence the GEM System is the only Expandable Primary System in the market.

BENEFITS OF THE GEM SYSTEM

The GEM System's capabilities will allow Client' Operators to follow this chemical regime and make the overall operation easy and successful, as well as to provide:

- Greater Contaminant Removal Rates
- Greater Chemical Efficiency (if chemistry is used)
- Drier and Less Sludge
- Expandable in Terms of Flow or/and Contaminants
- Smaller Footprint
- Easy Relocation
- Stainless Steel Construction
- Easy Installation
- Energy Efficient: The GEM System dissolves oxygen into 100% of the waste stream under high pressure (no wasted energy on a re-circulation loop for aeration),
- Easy Operation/Low Maintenance: Maintenance and operational issues that normally exist with conventional DAF technologies are eliminated.

All in all, the GEM System provides the most sustainable primary wastewater benefits in the market.

ADVANTAGES OF A DUAL BANK SYSTEM

When equalization time is a constraint, the Dual LSGM approach provides superior results, extreme flexibility and substantial savings to a facility. The Dual LSGM System is automated in that the second bank of LSGM's will engage as the flow increases. This allows the System to operate in accordance with the facility from less than 1,050 gpm up to 2,100 gpm. Operating two LSGM banks saves on electrical and chemical costs in that having one bank on standby at all times provides instantaneous demand to satisfy large flow spikes from the plant while providing excellent contaminant removal rates and reduced and drier sludge. Since both banks discharge into a single tank, footprint is also greatly minimized.

Should factory production increase, the Dual Bank System can be adjusted to handle the higher flow with easy and minimal adjustments to the LSGM cartridges. The time required to expand the flow of the GEM System is 20-40 minutes. No additional equipment or change in plumbing/process configuration is necessary, and only basic hand tools are required.

EQUIPMENT

The GEM System **1050/2100XL** is equipped with one tank and two banks of 6 LSGM Mixers allowing the client to run up to **3,024,000** gallons per day (or **2,100** gpm) with no additional capital expenditures. Following are the components for the GEM System Dual **1050/2100XL**:

- 1 Flotation Tank (L: 31' x W: 11'5" x H: 12'10")
- 1 Skimmer Assembly
- 1 Sludge Hopper (L: 5' 4" x W: 11' 4" x H: 8'11")
- 2 Banks of 6 LSGM's (Liquid, Solid, Gas Mixer Heads)
- 2 Primary Pumps
- 2 Control Panels
- 2 Air Compressors
- 1 Solids Pump
- 2 Liquid Level Sensors for sludge hopper to actuate solids pump and GEM System Start-Stop.



Total area of the GEM System Dual 1050/2100XL is: L: 36'4" x W: 13'6" x H: 12'10".

The System power requirements are 480V 3 phase. There are 4 panels: Two panels (GEM Panel 1 and GEM Panel 2) need to carry 150 amps each; 1 panel (Auxiliary Panel for screen, transfer pump and floats, D-Loop pump and floats 1 and 2 and pH System 1 and 2) must carry 200 amps; the 4th panel (chemical systems) must carry 60 amps. **Calculation of amps is at max capacity when all pumps are at startup.** The Client is responsible for providing power to the System.

For cutsheet of the GEM System Dual 1050/2100XL, please see Appendix A.

Screen: Install an IFS 6096 Internally Fed Rc construction, described as follows:

- 60" diameter by 96" long, wedgewire screen
- **0.030"** screen slot openings;
- headbox tank assembly, extending 2/3 the length
- connections are stainless steel stub ends c/w
- splash guards in 10 gauge plate;
- open trough discharge;
- full ring, driven sprocket fabricated from stainless steel
- shaft mounted, 10" diameter by 3-1/2" wide UHMW polyurethane, roll wheels, supported by 1-1/4" heavy duty, pillow block, roller bearings;
- external spray bar 2" SCH 40, 304 stainless steel pipe c/w 31 fan jet, spray nozzles and hinged splash cover;
- #80 corrosion resistant roller chain, stainless steel driven sprocket and hardened carbon steel drive sprocket;
- helical gear drive c/w 2 hp, TEFC motor, 460V/3Ph/60Hz. (additional voltages and classifications available, additional cost may apply).



Option 1: solids discharge chute, in all 304 stainless steel;

Option 2: drain pan, in all 304 stainless steel;

Option 3: enclosure c/w with drum head covers, in all 304 stainless steel;

Option 4: One (1) only **Control Panel / MCC** to operate **IPEC Model IFS 6096**, specifications as follows:

Enclosure

- NEMA 4X enclosure;
- stainless steel panel box c/w hinged door.

Devices / Components

- one (1) 30 amp, fused main disconnect;
- one (1) Va control transformer, 460 - 115;
- one (1) IEC motor contractor c/w overload;
- operator switch for:
 - E stop;
 - control power;
 - hand/off/auto switches for spray wash water and motor;
- two (2) sequencing timers for operating motors and shower solenoids;
- dry contacts for system start, alarms and run status.

Field Devices

- one (1) NC solenoid valve to operate spray wash system.

Please refer to Appendix B for Cut Sheet of Screen 6096.



CHEMISTRY

Based upon Client's Sample sent to CWT August 7, 2015, CWT achieved 99% TSS, 94% COD and 99% Turbidity reductions using the following recommended chemical regime:

- 30 - 60 ppm Cationic Polymer
- 5 – 10 ppm Anionic Polymer

Please refer to Appendix C for laboratory analysis.

CHEMICAL INJECTION UNIT

Each Chemical Injection System includes:

2 - Delivery Chemical Pumps

1 - Tank (according to unit size)

1 - Control Panel (Manages chem. pump dosages and syncing with GEM System)

1 - Mixer

1 - Float assembly



Front View



Side View

CWT proposes for this application:

1 – Automatic Cationic Chemical Injection System (3,000 gallons)

1 – Automatic Anionic Chemical Injection System (500 gallons)

**Each bank of LSGM heads has a dedicated chemical injection pump.*

The Chemical Injection System contains a separate control panel, with special technology implemented by CWT and comes with the following features:

- Complete integration with the main GEM System control panel. GEM System will operate in accordance with all of the functions of each chemical mixing station.

- Automatic high and low level sensors/floaters for chemical mixing and dosing operations. The low level sensor raises an alarm, and stops all wastewater treatment processes of the GEM System in order to prevent damage to the chemical injection pumps. The high level sensor automates the water fill and mixing process. By pressing a button, the water-fill cycle will start, and once the tank is full, the water-fill cycle stops. This prevents accidental spilling of chemical on the operational floor.
- Auto dry polymer mix-down systems will keep cationic tank full at all times. Granular polymers will be pre-wetted with tap water and added automatically to the tank when level drops to pre-set level. Tap water will be added automatically to the chem. mix-down tank and mixer propellers will stir the mixture together for a programmable time. A baffle inside the tank will prevent over-mixing of older material in the tank. New material will be drawn under the baffle as chem. injection pumps draw off the liquid in the tank. Once this material is protected, the tank will automatically repeat to keep the tank full for continuous run of the GEM System.
- Each pump comes with a special motor controller and encoder for controlling chemical dose rates into the GEM System. In order to set the dose rate, plant operations simply set the milliliters per minute via up and down arrows on the control panel interface.

HOOK-UP, START UP AND TRAINING

Client is responsible for all civil work and equipment/labor required to place CWT equipment. CWT can assist Client or Client-hired subcontractor. Client is responsible for providing 480V III phase power to the GEM System itself. Client is responsible for plumbing influent to the predetermined CWT-supplied influent manifold location. Client is also responsible for ensuring that the water, prior to entering the GEM System, will reduce water temperature to less than 100° F. Temperature higher than this will render the polymers less effective. CWT will work closely with Client and/or hired subcontractor to assure a smooth installation/System transition. Hook-Up, Start-Up and Training will be charged at \$25,000.00 plus the costs of airfare, lodging, meals and transportation of 1-2 technicians for 20 days.

Should hook-up, start-up and training exceed 20 days due to lack of site preparation by Client or unavailability of Client's operators, or for any other reason not related to or controlled by CWT, each additional day will be charged at \$1,000.00 per day plus expenses per CWT technician.

NOTES AND CLARIFICATIONS

- All civil/site/permitting and facility/building work to be provided by others.
- Provisions for modification costs to the existing facilities or structures are not included.
- No underground piping, or piping going through walls is included. Client is responsible for all wall penetrations.
- No scaffolding has been included in this proposal (scaffolding can be quoted by CWT if desired by Client).
- Client is responsible for moving and placing the equipment.
- Client is responsible for bringing the process stream to the GEM System and piping GEM System effluent to the discharge point
- Client is responsible for ensuring that the influent water temperature be less than 100° F before the GEM System and Chemical Injection Units.
- Unloading and storage of equipment is not included.
- No provisions for weather conditions or heat tracing equipment have been made.
- Foundation and/or structural support for all equipment to be provided by Client.
- Client must provide all provisions for lifts, ladders and other equipment in order for CWT to perform work.
- If Client wishes to have another contractor perform work required to install the GEM System, it is the Client's responsibility to pay that contractor, and shall not affect the scope and pricing of this proposal.
- All earthquake seismic work which includes, but is not limited to: securing straps, boring holes and coordinating inspection is to be done by others.
- Client responsible to supply water for automatic mix-down systems with pressure between 40 and 100 psi and minimum flow of 10 gpm (600 gph) to each unit.
- Client responsible for providing floor drains (or equivalent drainage system) in area of GEM System.
- Client is responsible for ensuring that chemical make-down water temperature be greater than 50° F.
- All piping and conduit is to be Schedule 80 PVC for water/fluids and Schedule 40 PVC for electrical unless otherwise agreed to by CWT and Client.
- Client is responsible for landing power inside GEM System primary control box.
- All change orders shall be in writing with an agreed rate of labor and materials as well as the completion time frame being adjusted.
- Additional scope added in the field will be charged at CWT's labor, travel and engineering rate and must be requested and approved in writing by Client and CWT.
- CWT is not responsible for delays caused by third party contractors, weather or the Client/Facility not being ready for installation. If Client/Facility is not ready when stated by Client, CWT reserves the right to pull installers off job site and reschedule at Client's expense until facility is ready for installation of the GEM System – at which point CWT and Client will agree on a new schedule.
- If Client desires to use Ferric, Ferric Sulfate should be used as Ferric Chloride is corrosive. Any questions regarding this should be addressed to CWT by Client.

PROCESS DESCRIPTION

Water from Client's 300,000 gallon equalization (EQ) tank will be pumped (by Client) to CWT's 2,500 gpm self-cleaning internally fed rotary drum screen (RDS) which will sit on a platform (by CWT). From the RDS, water will flow by gravity into CWT's two 10,500 gallon Flash Tanks (by CWT) for homogenization and pH adjustment of the stream. Water will be pulled from the bottom of the EQ Tank and fed to the D-Loop pump. The water will be injected with Acid or Caustic in CWT's D-Loop (pumps by CWT, totes by Client) for fine pH adjustment. This will reduce overall polymer usage and result in less operator interface.

CWT will place level sensors into the Flash Tanks which will activate the GEM System feed pump that directs the stream to the GEM System. As the level in the flash tanks rise, one sensor will activate the GEM feed pump which will initiate the stream to gravity flow to the 1st bank of LSGM heads. As the water level continues to rise in the tank, the 2nd bank of LSGM's will activate as needed. Each bank of heads can be expanded up to 1,050 gpm for a total throughput of 2,100 gpm or 3,024,000 gpd. Water will continue to be processed from the EQ Tank to the GEM System until the low level sensor is reached, at which time the GEM System will stop.

The GEM System will consist of one tank with two banks of 6 LSGM heads. Each LSGM bank will be fed under controlled pressure where 100% of the stream will be subject to specific chemistry and pressurized air. A cover for the GEM System and the Sludge Hopper on the GEM System is quoted herein. Cationic and anionic polymers will be housed in 3,000 gallon and 500 gallon tanks respectively for automatic mix-down and injection into the GEM System. The process will provide the flexibility of adding chemistry under pressure or, if elected due to the nature of the chemistry, to add one or more chemistries after the pressure drop and bubble formation.

The treated and separated waste stream will be released into the bloom chamber near the surface of the GEM System and the flocculated waste will form a layer of material on the surface. This layer will be moved and decanted across the length of the GEM System by the skimmer paddles and into the sludge hopper. CWT will optimize the skimming process to maximize de-watering in the GEM System prior to discharging of solid waste. Once the solids reach "high level" in the GEM System solids hopper, the GEM System's solids pump will move the sludge to Client's piping that will take the solids to CWT's two 7,400 gallon conical bottom sludge tanks for further decant of sludge. The clean water will be directed to and piped by Client to Client's next process. The sludge will be directed by Client from CWT's sludge tanks to Client's biodigester. Flash Tanks, the GEM System and the Sludge Tanks will each contain two carbon filters for odor reduction. From these units, CWT will provide a 10' pipe that will be vertically erected for ventilation. Client will provide the venting from CWT's pipe through the roof of the building.

Note: The drier the sludge, the lower costs for hauling and disposal of sludge. CWT's sludge decants over a number of days due to the air in the flocs and the polymers used. This results in much drier sludge than traditional DAF technology.

Refer to Appendix D for layout and Appendix E for process diagram.

PRICING

GEM System Dual 1050/2100XL **\$298,000.00**

Includes GEM feed pumps, sludge pumps, temporary sludge hopper, water pumps, air compressors, skimmer tanks and paddles and GEM control panels. *Includes upcharge to push GEM System from 1,800 gpm to 2,100 gpm with TSS loadings of over 6,300 ppm.*

Rotary Drum Screen (Internally Fed 6096) **140,000.00**

Includes one 2,500 gpm Self-Cleaning RDS w/Stand, Control Panel, Drain pan, solids cone to 12", enclosure covers, solenoids *for TSS loadings up to 8,000 mg/L.*

Covers for GEM System and Hopper (Stainless Steel) 7,500.00

Carbon Filters for Tanks (x6) 9,000.00

Flash Tanks (x2) 46,500.00

Includes two 10,500 gallon tanks, two Carver pumps and stands, and associated flanges, gaskets, struts and high temperature floats w/2 carbon filters.

Fine pH Adjustment System (x2) 13,000.00

In *each* will be an Acid Pump, Caustic Pump, pH Controller, 2 pH Probes, 1 acid and 1 caustic quill

D-Loop (x2) (Increased to 8" from 6") **107,000.00**

Includes two D-Loops made of 8" Sch80 PVC (upgraded from 6") and fittings, tank adapters, cast iron gate valves, elbows, piping, stands, etc. Also includes two Carver 1250 gpm centrifugal pumps w/stands, 8" inline mixers and stand-alone rack for D-Loops.

Automatic Cationic Polymer Mix-Down and Injection System **52,500.00**

Includes one 3,000 gallon tank and automated dry polymer mix down system – *Tank size Increased due to high TSS loading.*

Automatic Anionic Polymer Mix-Down and Injection System 46,000.00

Includes one 500 gallon tank and automated dry polymer mix down system – *Tank size Increased due to high TSS loading.*

Sludge Decant Tanks (x 2) 45,500.00

Includes two 7,400 gallon Sludge Tanks with Stand

Piping and Electrical Conduit 20,000.00

Equipment Subtotal \$785,000.00

Hook-Up, Start-Up and Training 25,000.00

Total Purchase Price **\$810,000.00**

Hook - Up, Start – Up and Training will be charged at \$25,000.00 (Listed above) plus all expenses such as transportation of 1 - 2 technicians, lodging, meals and rental car during the 20 days. Should Hook-Up, Start-Up and Training period exceed 20 business days, each additional day will be provided at \$1,000.00/day plus expenses should site not be ready or operators not available for training. This pricing accounts for only one mobilization.

OPTIONAL

Piping Water to and From Screen, Sludge From Screen \$33,000.00*

Piping from EQ Tank to Flash Tank \$15,000.00

Sludge Pipes and Fittings to Next Process \$16,500.00

**May require an extra 3-5 days on site for installation.*

Crane and installation of screen and scaffold (if placed above the EQ) is the responsibility of Client or Client's contractor.

All of CWT piping will be PVC schedule 80.

This proposal contains 20 hours of engineering. Should additional engineering be required, CWT will charge \$150 per hour extra.

PURCHASE TERMS

30% down payment

30% once P&ID is accepted

30% upon delivery

10% 30 days after installation or 90 days after system was shipped whichever occurs first.

Equipment is EX WORKS CWT Plant – Los Angeles, CA.

Customer is responsible for all duties and taxes if any.

All prices are in US Dollars.

No union labor is included.

Equipment will remain property of CWT until it is paid in full.

Per Client, request CWT can finance the equipment.

CWT will ensure that the System is operational and tuned to the stream conditions per the direction of the Client. All Client operators will be trained on the System operations.

Should additional training be necessary or should tuning of the System to changing stream conditions require additional support after installation, the work will be billed at \$1,000.00 per day per man plus costs.

CWT will provide the entire component manufacturers' guarantees. The total GEM System is guaranteed for one year.

This proposal is valid **September 30, 2015**. Please see Appendix F for Standard Terms of Sale.

The System will be delivered 90 - 120 days after receipt of P.O. and down payment. CWT can expedite delivery if needed. If you have any questions, do not hesitate to contact us at 414-336-8735.

Once again, thank you for your trust in CWT.

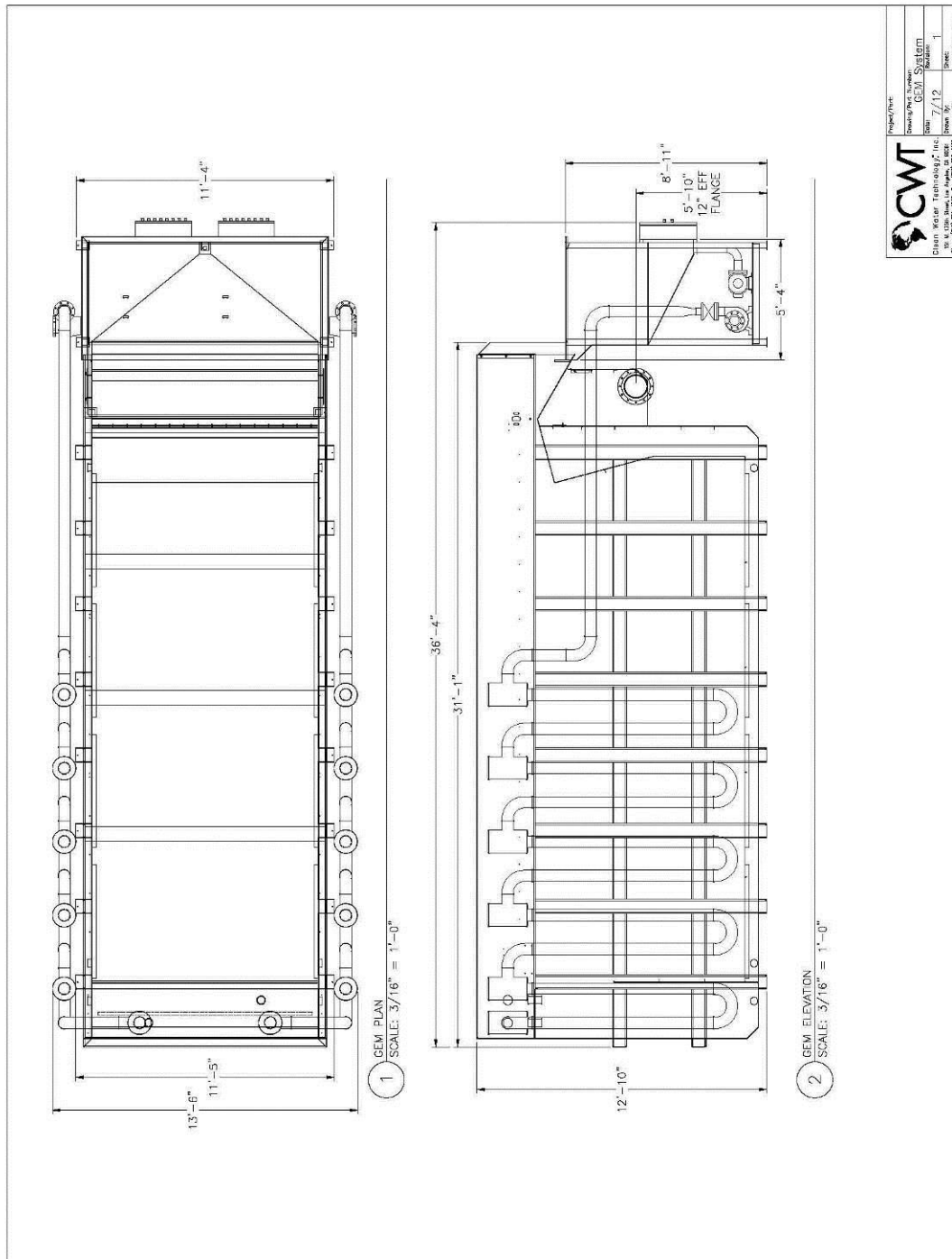
Best Regards,

Linda Englander Mills

Ariel Lechter

Clean Water Technology, Inc.

APPENDIX A GEM SYSTEM DUAL 1050/2100XL CUT SHEET



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APPENDIX C LABORATORY ANALYSIS

Lab Report

August 7, 2015

Sample: Big Ox Energy

General Comments: 4 bottles, 1 sample (composite)

Flow: 2,100 GPM

Following analysis:

SAMPLE 1. "influent" treated with dual flocculants only

	<i>Before</i>		<i>After</i>		<i>% Reduction</i>
TSS/ppm	6,300		45		99%
COD/ppm	6,600		400		94%
Turbidity/NTU	Over 1,000		8		99%

Treatment: at pH 7.6: 60 ppm CWT 1494
10 ppm CWT 390

SAMPLE 2. "influent" treated with coagulant + dual flocculants (to reduce cationic polymer)

	<i>Before</i>		<i>After</i>		<i>% Reduction</i>
TSS/ppm	6,300		85		98%
COD/ppm	6,600		480		92%
Turbidity/NTU	Over 1,000		22		98%

Treatment: at pH 7.6: 20 ppm CWT 1716
30 ppm CWT 1494
10 ppm CWT 390

Dr. Colic's suggestion: Wastewater was easily treated using either dual flocculants (cationic and anionic polymers) or with the introduction of coagulant to reduce the quantity of polymers needed. If coagulant such as ferric is used, sludge will be less dry but removal rates would still be very good.

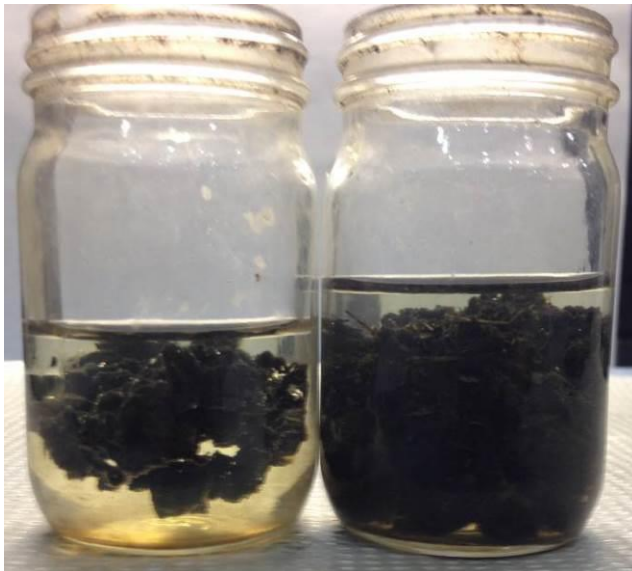
FIGURE 1. Jar test of SAMPLE 1.



Left: before treatment

Right: after treatment

FIGURE 2. Comparison of sludge with dual flocculants (left) and coagulant + dual flocculants (right)

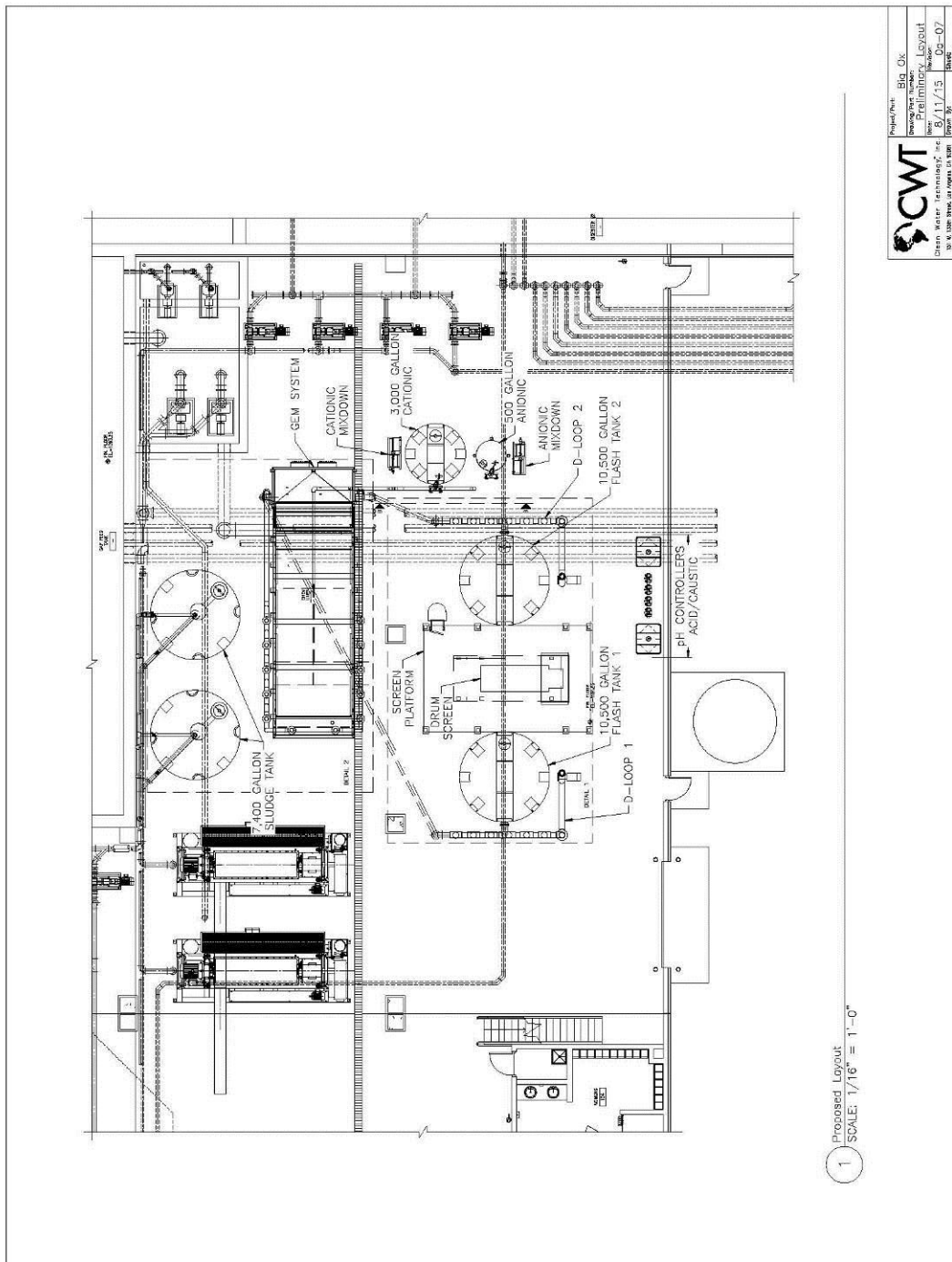


Left: dual flocculants

Right: coagulant + dual flocculants

Results indicated above only represent sample received by Clean Water Technology, Inc. and are only true to the sample analyzed at the Clean Water Technology Lab

APPENDIX D SYSTEM LAYOUT



APPENDIX F

STANDARD TERMS OF SALE

1. **Applicable Terms.** These terms govern the purchase and sale of the equipment and related services, if any (collectively, "Equipment"), referred to in Seller's purchase order, quotation, proposal or acknowledgment, as the case may be ("Seller's Documentation"). Whether these terms are included in an offer or an acceptance by Seller, such offer or acceptance is conditioned on Buyer's assent to these terms. Seller rejects all additional or different terms in any of Buyer's forms or documents.
2. **Payment.** Buyer shall pay Seller the full purchase price as set forth in Seller's Documentation. Unless Seller's Documentation provides otherwise, freight, storage, insurance and all taxes, duties or other governmental charges relating to the Equipment shall be paid by Buyer. If Seller is required to pay any such charges, Buyer shall immediately reimburse Seller. All payments are due within 30 days after receipt of invoice. Buyer shall be charged the lower of 1 ½% interest per month or the maximum legal rate on all amounts not received by the due date and shall pay all of Seller's reasonable costs (including attorneys' fees) of collecting amounts due but unpaid. All orders are subject to credit approval.
3. **Delivery.** Delivery of the Equipment shall be in material compliance with the schedule in Seller's Documentation. Unless Seller's Documentation provides otherwise, Delivery terms are F.O.B. Seller's facility.
4. **Ownership of Materials.** All devices, designs (including drawings, plans and specifications), estimates, prices, notes, electronic data and other documents or information prepared or disclosed by Seller, and all related intellectual property rights, shall remain Seller's property. Seller grants Buyer a non-exclusive, non-transferable license to use any such material solely for Buyer's use of the Equipment. Buyer shall not disclose any such material to third parties without Seller's prior written consent.
5. **Changes.** Seller shall not implement any changes in the scope of work described in Seller's Documentation unless Buyer and Seller agree in writing to the details of the change and any resulting price, schedule or other contractual modifications. This includes any changes necessitated by a change in applicable law occurring after the effective date of any contract including these terms.
6. **Warranty.** Subject to the following sentence, Seller warrants to Buyer that the Equipment shall materially conform to the description in Seller's Documentation and shall be free from defects in material and workmanship. The foregoing warranty shall not apply to any Equipment that is specified or otherwise demanded by Buyer and is not manufactured or selected by Seller, as to which (i) Seller hereby assigns to Buyer, to the extent assignable, any warranties made to Seller and (ii) Seller shall have no other liability to Buyer under warranty, tort or any other legal theory. If Buyer gives Seller prompt written notice of breach of this warranty within 18 months from shipment or 1 year from start-up, whichever occurs first (the "Warranty Period"), Seller shall, at its sole option and as Buyer's sole remedy, repair or replace the subject parts or refund the purchase price therefore. If Seller determines that any claimed breach is not, in fact, covered by this warranty, Buyer shall pay Seller its then customary charges for any repair or replacement made by Seller. Seller's warranty is conditioned on Buyer's (a) operating and maintaining the Equipment in accordance with Seller's instructions, (b) not making any unauthorized repairs or alterations, and (c) not being in default of any payment obligation to Seller. Seller's warranty does not cover damage caused by chemical action or abrasive material, misuse or improper installation (unless installed by Seller). THE WARRANTIES SET FORTH IN THIS SECTION ARE SELLER'S SOLE AND EXCLUSIVE WARRANTIES AND ARE SUBJECT TO SECTION 10 BELOW. SELLER MAKES NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE.
7. **Indemnity.** Seller shall indemnify, defend and hold Buyer harmless from any claim, cause of action or liability incurred by Buyer as a result of third party claims for personal injury, death or damage to tangible property, to the extent caused by Seller's negligence arising from condition of the Equipment in violation of the Agreement (as defined herein). Seller shall not have the sole-authority to direct the defense of and (i) hire at Buyer's expense counsel of its choosing (as opposed to Buyer's selection), or (ii) settle any indemnified claim. Seller's indemnification is conditioned on Buyer (a), without Buyer's written consent, not to be unreasonably withheld. Buyer shall promptly, within the Warranty Period, notify Seller of any claim, and provide reasonable cooperation in the defense of any claim.
8. **Force Majeure.** Neither Seller nor Buyer shall have any liability for any breach (except for breach of payment obligations) caused by extreme weather or other act of God, strike or other labor shortage or disturbance, fire, accident, war or civil disturbance, delay of carriers, failure of normal sources of supply, act of government or any

other cause beyond such party's reasonable control.

9. Cancellation. If Buyer cancels or suspends its order for any reason other than Seller's breach, Buyer shall promptly pay Seller for work performed prior to cancellation or suspension and any other direct costs incurred by Seller as a result of such cancellation or suspension.

10. Reservation Clause. Buyer acknowledges that Seller is required to comply with applicable export laws and regulations relating to the sale, exportation, transfer, assignment, disposal and usage of the Equipment provided under this Agreement, including any export license requirements. Buyer agrees that such Equipment shall not at any time directly or indirectly be used, exported, sold, transferred, assigned or otherwise disposed of in a manner which will result in non-compliance with such applicable export laws and regulations. It shall be a condition of the continuing performance by Seller of its obligations hereunder that compliance with such export laws and regulations be maintained at all times. BUYER AGREES TO INDEMNIFY AND HOLD SELLER HARMLESS FROM ANY AND ALL COSTS, LIABILITIES, PENALTIES, SANCTIONS AND FINES RELATED TO NON-COMPLIANCE WITH APPLICABLE EXPORT LAWS AND REGULATIONS.

11. LIMITATION OF LIABILITY. NOTWITHSTANDING ANYTHING ELSE TO THE CONTRARY, SELLER SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, PUNITIVE OR OTHER INDIRECT DAMAGES, AND SELLER'S TOTAL LIABILITY ARISING AT ANY TIME FROM THE SALE OR USE OF THE EQUIPMENT SHALL NOT EXCEED THE PURCHASE PRICE PAID FOR THE EQUIPMENT. THESE LIMITATIONS APPLY WHETHER THE LIABILITY IS BASED ON CONTRACT, TORT, STRICT LIABILITY OR ANY OTHER THEORY.

Miscellaneous. If these terms are issued in connection with a government contract, they shall be deemed to include those federal acquisition regulations that are required by law to be included. These terms, together with any quotation, purchase order or acknowledgement issued or signed by the Seller, comprise the complete and exclusive statement of the agreement between the parties (the "Agreement") and supersede any terms contained in Buyer's documents, unless separately signed by Seller. No part of the Agreement may be changed or cancelled except by a written document signed by Seller and Buyer. No course of dealing or performance, usage of trade or failure to enforce any term shall be used to modify the Agreement. If any of these terms is unenforceable, such term shall be limited only to the extent necessary to make it enforceable, and all other terms shall remain in full force and effect. Buyer may not assign or permit any other transfer of the Agreement without Seller's prior written consent. The Agreement shall be governed by the laws of the State of Delaware without regard to its conflict of laws provisions.